

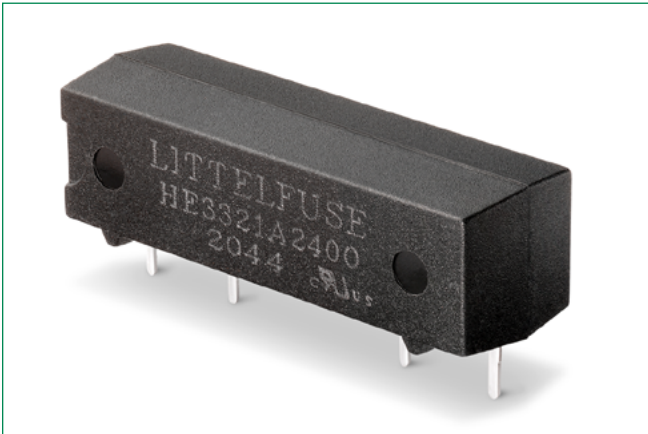


**THE DATASHEET OF  
HE3321A0400**



# H3300

## Miniature Single In-line Reed Relay



### Description

The HE3300 is a miniature reed relay in a SIL package with a choice of normally open, normally open high voltage or changeover contacts capable of switching up to 300Vdc at 10W. It is available with 5V, 12V, and 24V coils and has external magnetic shield options.

### Features & Benefits

- Single in-line configuration allows high packing densities, minimizing space and cost
- Lower power coil consumption than competing electromechanical devices
- Hermetically sealed switching contact is immune to its environment
- Transfer molded package gives maximum component protection
- Miniature single in-line package
- High voltage switching version
- Normally open and change over contact configurations available
- External magnetic shield option
- RoHS Compliant
- UL Recognized to UL 508 as an Industrial Control Switch

### Agency Approvals

| Agency | Agency File Number |
|--------|--------------------|
|        | E47258             |

**Note:** Not all parts are UL Recognized. Contact Littelfuse for specific parts and agency approval ratings.

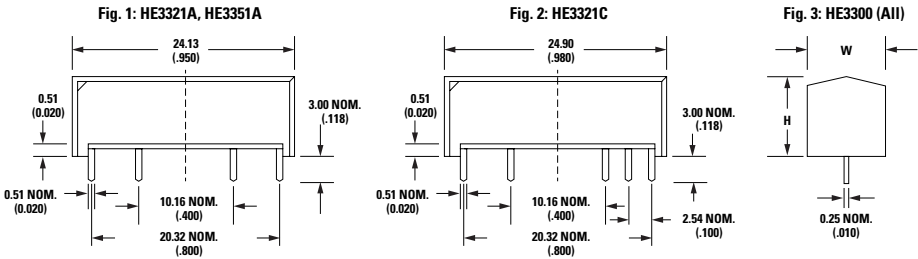
### Applications

- Security Systems
- Telecom Equipments
- Process Control Systems
- Automatic Test Equipments
- Instrumentation

### Dimensions

Dimensions in mm (inch)

| Relay Type | Body Type       | L            | W           | H           |
|------------|-----------------|--------------|-------------|-------------|
| HE3300     | Transfer Molded | 24.13 (.950) | 7.00 (.276) | 7.40 (.291) |
|            | External Shield | 24.90 (.980) | 7.60 (.299) | 7.80 (.307) |



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**Table 2**  
**Electrical and Operating Characteristics @ 25°C**

| Characteristics               |  |                       | Contact Type            |                             |                         |
|-------------------------------|--|-----------------------|-------------------------|-----------------------------|-------------------------|
|                               |  |                       | Form A SPST-NO Standard | Form A SPST-NO High Voltage | Form C SPST-CO Standard |
|                               |  |                       | Relay Types             |                             |                         |
|                               |  |                       | HE3321A                 | HE3351A                     | HE3321C                 |
| Contact Rating <sup>1</sup>   | Power, Switching                         | Watt - max.           | 10                      | 10                          | 5                       |
|                               | Voltage, Switching <sup>2</sup>          | Vdc - max.            | 200                     | 300                         | 175                     |
|                               |  | Vac - max.            | 140                     | 265                         | 120                     |
|                               | Current, Switching <sup>3</sup>          | Adc - max.            | 0.5                     | 0.5                         | 0.25                    |
| Aac - max.                    |  | 0.35                  | 0.35                    | 0.18                        |                         |
|                               | Current, Carry                           | Adc - max.            | 1.2                     | 1.5                         | 1.5                     |
| Voltage Hold-off <sup>4</sup> | Across Open Contacts<br>Contacts to Coil | Vdc - min.            | 250                     | 450                         | 200                     |
|                               |  | Vac - min.            | 2500                    | 2500                        | 2500                    |
| Resistance                    | Contact, Initial                         | Ω max.                | 0.150                   | 0.150                       | 0.200                   |
|                               | Insulation Across Open Contacts          | Ω min.                | 10 <sup>10</sup>        | 10 <sup>10</sup>            | 10 <sup>10</sup>        |
|                               | Insulation Between Isolated Terminals    | Ω min.                | 10 <sup>10</sup>        | 10 <sup>10</sup>            | 10 <sup>10</sup>        |
| Timing                        | Operate Time                             |                       | 1.0                     | 1.0                         | 3.0                     |
|                               | Release Time                             | ms - max.             | 1.0                     | 1.0                         | 3.0                     |
| Environmental                 | Temperature, Operating                   | °C                    | -40 to +85              | -20 to +85                  | -40 to +85              |
|                               | Temperature, Storage <sup>5</sup>        | °C                    | -40 to +105             | -40 to +105                 | -40 to +105             |
|                               | Vibration Resistance                     | G - max. 10-2000 Hz.  | 20                      | 20                          | 20                      |
|                               | Shock Resistance                         | G - max. 11 ms ½ sine | 50                      | 50                          | 50                      |

**Notes:**

1. Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/lofe information.
2. When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A & AN107 for details.
3. Electrical Load Life Expectancy - Contact Littelfuse with voltage current values along with type of load.
4. Breakdown Voltage - Per MIL-STD-202, Method 301.
5. Storage Temperature - Long time exposure at elevated temperature may degrade solderability of the leads.

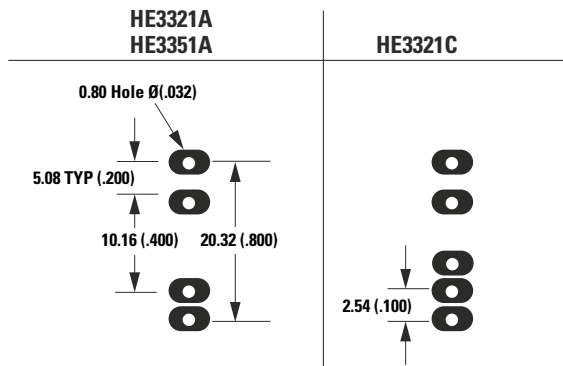
**Table 3**  
**Coil Characteristics @ 25°C**

| Contact Form & Type           | Electrical & Operating Characteristics | Dimensions      | Part Number | Nominal Coil Voltage Vdc | Coil Resistance ±10% Ohms | Must Operate Vdc | Must Release Vdc | Maximum Coil Voltage Vdc | Top View 2.54mm (0.1") Grid Dot on Case: Pin 1 Numbers not printed on case. |
|-------------------------------|--|-----------------|-------------|--------------------------|---------------------------|------------------|------------------|--------------------------|---|
| 1A<br>SPST-NO                 | See Table 2<br>Column 1                | See<br>Figure 1 | HE3321A0400 | 5                        | 500                       | 3.75             | 0.5              | 22                       |   |
|                               |  |                 | HE3321A1200 | 12                       | 500                       | 9.0              | 1.0              | 22                       |   |
|                               |  |                 | HE3321A2400 | 24                       | 2000                      | 18.0             | 2.0              | 44                       |   |
| 1C<br>SPDT-CO                 | See Table 2<br>Column 3                | See<br>Figure 2 | HE3321C0500 | 5                        | 125                       | 3.75             | 0.5              | 11                       |   |
|                               |  |                 | HE3321C1200 | 12                       | 500                       | 9.0              | 1.0              | 22                       |   |
|                               |  |                 | HE3321C2400 | 24                       | 2000                      | 18.0             | 2.0              | 44                       |   |
| 1A<br>SPST-NO<br>High Voltage | See Table 2<br>Column 2                | See<br>Figure 1 | HE3351A0500 | 5                        | 125                       | 3.75             | 0.5              | 11                       |   |
|                               |  |                 | HE3351A1200 | 12                       | 500                       | 9.0              | 1.0              | 22                       |   |
|                               |  |                 | HE3351A2400 | 24                       | 2000                      | 18.0             | 2.0              | 44                       |   |

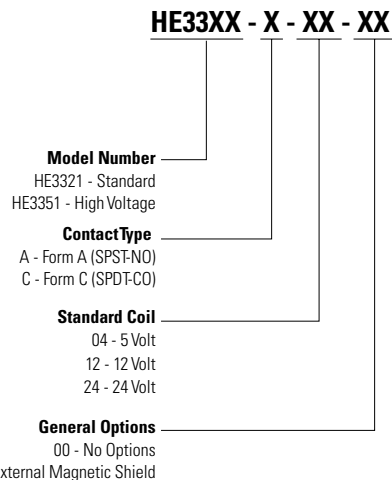
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## Miniature Single In-line Reed Relay

### HE3300 PCB Layout (Bottom View)



### Part Numbering System



**Note:** Not all combinations of Part Number suffixes are available. Contact Littelfuse for details.

### Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|------------------|-------------------------|----------|---------------------------|--------------|
| Bulk             | Bulk                    | 500      | N/A                       | N/A          |

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